

Mean Amplitudes of Vibration of the Halogen Molecules

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Dedicated to Prof. Achim Müller on the occasion of his 65th birthday

Mean amplitudes of vibration of the halogen molecules F_2 , Cl_2 , Br_2 , and I_2 have been calculated from known spectroscopic data in the temperature range between 0 and 1000 K. The results are briefly discussed, and some comparisons with the results of the related diatomic interhalogen molecules, as well as with experimental values obtained by electron diffraction experiments, are made.

Key words: F_2 , Cl_2 , Br_2 , I_2 ; Mean Amplitudes of Vibration; Bond Properties.